



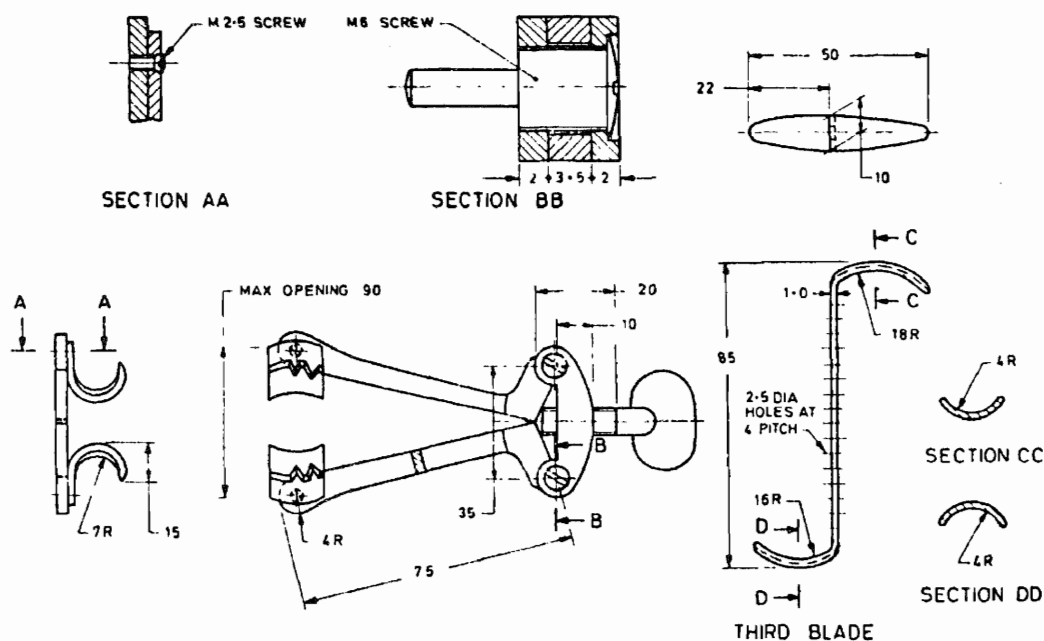
Indian Standard

(Reaffirmed 2013)

## SPECIFICATION FOR RETRACTOR, ENDAURAL ( LEMPERT'S PATTERN )

1. **Scope** — Dimensional and other requirements for endaural retractor Lempert's pattern used in ENT surgery.

2. **Shape and Dimensions** — As shown In Fig. 1.



All dimensions in millimetres.

FIG. 1 RETRACTOR, ENDAURAL (LEMPERT'S PATTERN)

3. **Material** — Stainless steel. Designation 22Cr13 or 30Cr13 of Schedule V of IS : 1570-1961 'Schedules for wrought steels for general engineering purposes'.

4. **Workmanship and Finish**

4.1 All surfaces shall be smooth and free from burrs, pits, cracks and other surface flaws.

4.2 All sharp edges shall be rounded.

4.3 The retracting arms shall not be loose at the pivots.

4.4 The retractor shall be passivated and finished dull.

5. **Heat Treatment** — The retractor shall be hardened and tempered to a hardness of 400 to 500 HV.

6. **Corrosion Resistance Test** — Scrub the retractor with soap and warm water, rinse in hot water and then dip in 95 percent ethyl alcohol. Dry the retractor. Immerse in copper sulphate solution at room temperature for 6 minutes and wash off with fresh water or wet cotton wool.

The solution shall be made up as follows:

Copper sulphate ( $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ )	4.0 g
Sulphuric acid ( $\text{H}_2\text{SO}_4$ ) ( sp gr 1.84 )	10.0 g
Water ( $\text{H}_2\text{O}$ )	90.0 ml

Adopted 7 July 1970

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Gr 1

INDIAN STANDARDS INSTITUTION  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002

MAX. RETAIL PRICE  
INCL. OF ALL TAXES  
₹ 90

AMENDMENT NO. 1    DECEMBER 1978  
TO  
IS : 5747-1970   SPECIFICATION FOR RETRACTOR,  
                    ENDAURAL (LEMPERT'S PATTERN)

**Alteration**

*(Page 1 clause 6)* — Substitute the following  
for the existing clause:

"6. Corrosion Resistange — The instrument shall  
satisfy the boiling and autoclaving test as spe-  
cified in IS:7531-1975 'Method for boiling and  
autoclaving test for corrosion resistance of  
stainless steel surgical Instruments'."

(CPDC 26)

## **IS : 5747 - 1970**

No red stains or spots on the retractor shall be allowed but dulling of the polished surface may be permitted.

**7. Marking** — Each retractor shall be marked with the following:

- a) Manufacturer's name, initials or recognized trade-mark; and
- b) The words ' stainless steel'.

**7.1 ISI Certification Marking** — Details available from the Indian Standards Institution .

**8. Packing** — Each retractor shall be wrapped in moisture-proof paper or put in a polyethylene bag and shall then be packed in an individual cardboard carton, or the packing shall be done as agreed to between the purchaser and the supplier.